

dilated behind. The lower jaw is strong, angular on the sides, with a narrow flat alveolar edge.

1. *EMYDA PUNCTATA*, Gray, *l. c.* f. 3.

Trionyx coromandelicus, Geoff.; Wagler, N. Syst. Amph. t. 2. f. 21-23 (anat.).

We have lately received specimens from Allahabad and Sikkim, collected by the brothers Schlagintweit.

2. *EMYDA CEYLONENSIS*, Gray, *l. c.* f. 4. t. 29 a.

Emyda vittata (Peters, Monatsb. 1854, p. 216), from Goa, appears to be the same as *E. ceylonensis*, Gray, Proc. Zool. Soc. 1855, p. 201; Cat. Shield Rept. 64. t. 29 a (1855). This animal is also figured by Mr. Bell as the true *Emyda punctata*, in his 'Testudinata,' t. 1, 2.

March 8, 1864.

Dr. J. E. Gray, F.R.S., in the Chair.

Dr. E. Crisp read a paper, entitled "Contributions to the Anatomy of the Eland."

The following papers were read:—

1. ON THE MAMMALS COLLECTED AND OBSERVED BY CAPT. J. H. SPEKE DURING THE EAST-AFRICAN EXPEDITION. BY P. L. SCLATER; WITH NOTES BY CAPT. J. H. SPEKE.

(Plates XII., XIII.)

Owing to the serious difficulties encountered on the route, the specimens of Mammals collected by Capt. Speke and Capt. Grant during the East-African Expedition are not so numerous, and those that have reached England are not in so perfect a condition, as might have been wished. They consist principally of heads and horns of Antelopes, and fragmentary parts of these and other species of animals killed for food—powder and shot having been too precious to admit of its habitual use for the purpose merely of procuring specimens. These, however, together with Capt. Speke's notes as to several well-known species, supply us with indications of the existence in Eastern Africa, between Zanzibar and Gondokoro, of species of Mammals belonging to the following orders:—

Quadrumana.....	1	Ruminantia.....	19
Chiroptera.....	2	Pachydermata.....	4
Carnivora.....	6	Proboscidea.....	1
Rodentia.....	6		



M & N Hanbury

TRAGELAPHUS SPEKII

J. Wolf del, et lith



J. Wolf del. et lith.

M & N Hannar. imp

COLYND A PULCHELLA

It will be observed that the only order in which Capt. Speke's specimens form anything like a series is among the Ruminants, where sixteen species of Antelopes appear determinable specifically, and two others are uncertain. By comparing these with what Rüppell obtained in Abyssinia, and Dr. Peters in Mozambique, it will be seen that the country traversed by Capt. Speke has much more resemblance zoologically, as far as its Antelopes go, to the latter. This will be seen by the following table, in which Capt. Speke's Antelopes and those that also occur in the other districts are placed side by side.

ABYSSINIA. (Rüppell.)	(Speke.)	MOZAMBIQUE. (Peters.)
	Antilope melampus	Antilope melampus.
	Calotragus melanotis	Calotragus melanotis.
Scopophorus montanus ..	Scopophorus montanus.	
	Nesotragus moschatus ..	Nesotragus moschatus.
Heleotragus bohor (?)	Heleotragus reduncus.	
	Kobus ellipsiprymnus....	Kobus ellipsiprymnus.
	— sing-sing.	
	— leucotis.	
	Ægoceros leucophæus.	
	— niger	Ægoceros niger.
	Catoblepas gorgon	Catoblepas gorgon.
	Boselaphus, sp.	Boselaphus lichtensteinii.
	Tragelaphus spekii.	
	— sylvaticus	Tragelaphus sylvaticus.
	Oreas livingstonii	Oreas canna(?).
	Strepsiceros kudu	Strepsiceros kudu.

Ordo I. QUADRUMANA.

1. CERCOPITHECUS, sp.

An imperfect skin of a species of *Cercopithecus*, indeterminate.
 "Tumberi" Monkey. Numerous in the forests near the coast, in Uzaramo.—J. H. S.

Ordo II. CHIROPTERA.

2. SCOTOPHILUS, sp.

One example in spirits of a Bat, which Dr. Gray identifies as a species of *Scotophilus*.

3. MEGADERMA FRONS, Geoffr. ; Wagn. Suppl. v. p. 643.

One dried specimen.

This Bat was shot flying at Meninga. They were numerous, but rose singly from the ground, and alighted sometimes in the bushes, sometimes again in the grass.—J. H. S.

Ordo III. CARNIVORA.

4. FELIS CHAUS, Güld.

An imperfect skin in Capt. Speke's collection is probably referable to this species.

Found near Meninga, concealed in a rut on the road.—J. H. S.

5. *FELIS LEO*, Linn.

Lions were abundant all along the route we traversed, though not often met with. In Uganda, in particular, there were many complaints made of their ravages.—J. H. S.

6. *FELIS SERVAL*.

An imperfect skin of a young kitten obtained in Unyoro is probably referable to this species.

The princes of Uganda wear the skin of this animal as a royal badge. This kitten was given to me alive by a native in Unyoro, under the condition that, if it died, the carcase was to be given back to him for his dinner.—J. H. S.

7. *HERPESTES BADIUS*, Smith, Ill. S. Afr. Zool. pl. 4.

Mgunda Mkali.

Seen singly in the wilderness of Mgunda Mkali, on the ground.—J. H. S.

8. *OTOCYON LALANDII* (Smith).

Shot in Ugogo, whilst foraging alone in the jungle.—J. H. S.

9. *HYÆNA CROCUTA*, Zimm.

Capt. Speke speaks of this (P. Z. S. 1863, p. 4) as the common scavenger of the country. It appears to be abundant all over Eastern Africa.

Ordo IV. RODENTIA.

10. *SCIURUS ORNATUS*, J. E. Gray, P. Z. S. 1864, p. 13, Pl. I.

Dr. Gray has identified a portion of skin of a Squirrel obtained by Capt. Speke as belonging to his newly discovered species, described and figured *antea*, p. 13.

11. *GEORYCHUS ALBIFRONS*, Gray, sp. nov.12. *GEORYCHUS PALLIDUS*, Gray, sp. nov.

Two skins of a *Georychus* are in the collection, of which Capt. Speke does not know the exact locality. Dr. Gray has kindly undertaken the examination of them, and his remarks on them will shortly be read to the Meeting.

13. *GOLUNDA PULCHELLA*, Gray, P. Z. S. 1864, p. 57. (Pl. XIII.)

Unyamuezi. Capt. Speke only procured a very imperfect skin of this beautiful Mouse. Dr. Gray, having subsequently received a more perfect specimen (stated to have been obtained on the west coast), has lately described it as new. Mr. Wolf's figure is taken from the latter specimen.

This Grass-Rat is common in the grasses in Unyamuezi.—J. H. S.

14. EURYOTIS, sp.

Imperfect skin. Unyamuezi. Lives in houses, like the common House-Rat in this country.

15. AULACODUS SWINDERNIANUS.

A head of this Rodent, from Uganda.

This animal was given to me alive by the King of Uganda. I never met with it in a wild state, though they are commonly caught by his hunters for the royal table.—J. H. S.

Ordo V. RUMINANTIA.

16. ÆPYCEROS MELAMPUS, Licht.

Uzaramo. Two heads of males. Native name, "*Pallah*."

One of the commonest Antelopes in Uzaramo and along our route up to Unyamuezi. They roam about in large herds, frequenting open parts of the forest.—J. H. S.

17. CALOTRAGUS, sp.

Usui; S. of Karagweh. Imperfect head of a male; not sufficient for the determination of the species. Capt. Speke thinks it is the Grysbok (*C. melanotis*, Thunb.).

18. SCOPOPHORUS MONTANUS (Rüpp.).

Karagweh. Imperfect head of male.

Shot on the mountains in Karagweh, where it is not very common, moving about in small herds.—J. H. S.

19. NESOTRAGUS MOSCHATUS, Von Duben.

Specimens of this little Antelope were obtained by Capt. Speke in the island of Zanzibar; these are now in the British Museum.

20. HELEOTRAGUS REDUNCUS (Pall.).

Capt. Grant shot the only example of this Antelope we obtained, in Usagara.—J. H. S.

21. KOBUS ELLIPSIPRYMNUS (Ogilby).

"Uzaramo." Heads of three males and three females of this Antelope.

This fine Antelope is very numerous in Uzaramo, frequenting the jungle along the banks of the Kingani river. The lunate mark on the rump is very distinct in the living animal. The does and young are met with in considerable herds; the old bucks singly, or in twos and threes. After crossing the hill-range we saw no more of this species.—J. H. S.

22. KOBUS SING-SING (Bennett)?

From Uganda. Capt. Speke has brought home two heads of

males of a large species of Antelope, which is apparently not different from the Sing-Sing of the western coast.



Sing-Sing ?

The general aspect of the head resembles that of *K. ellipsiprymnus*, but the face is blacker, and the top of the head between the horns dark rufous.

“The Nsumma Antelope was only met with in Uganda and Madi, where it lies concealed in the high grasses in the daytime, and comes out to feed in the evenings. The males are often found singly, but the females in herds. It does not possess the lunate mark on the rump of the Waterbuck, and does not stand so high, but is rather more stoutly built.”—J. H. S.

23. KOBUS, sp.?

Uganda. Imperfect head of female, probably of a species of *Kobus*. Native name, "Ndjezza."

The "Ndjezza" is found among the grasses near water in Uganda. I never obtained the male of this Antelope.—J. H. S.

24. KOBUS LEUCOTIS (Licht. & Pet.).

Antelope leucotis, Licht. et Peters, Monatsb. Akad. Berl. 1853, p. 164.

Uganda. Two heads.

This Antelope, of which the native name is "Nsunnu," is found in Uganda, Ungoro, and Madi, but never south of those countries. They roam about in large herds in thick bush and grassy plains, but never go far from water.—J. H. S.

25. ÆGOCEROS LEUCOPHÆUS (Pallas).

Found in swampy ground near Kazeh in considerable numbers. The specimen, of which I brought home the head, after being wounded by my rifle, was pulled down at night by lions; so that I got it in the morning.—J. H. S.

26. ÆGOCEROS NIGER (Harris).

Once seen near Kazeh, and distinctly recognized, as Capt. Speke informs me.

Capt. Speke has also brought home the head of a young (male?) Antelope, which he shot at Ukutu, under the east-coast range. Dr. Gray has kindly examined this for me, and determined it as referable to this species.

27. CATOBLEPAS GORGON, H. Smith.

Heads of a male and female Gnu, which I cannot distinguish from this species.

This Gnu is found in large herds in Khutu, on the western borders of Uzaramo, close to the Kingani river. It inhabits the park-like lands adjoining the river. It was not seen after crossing the hill-range.—J. H. S.

28. BOSELAPHUS — ?.

Capt. Speke's "Hartebeest" (see P. Z. S. 1863, p. 3), which he found all along his route from the coast to Gondokoro, can hardly have been *B. caama*. It was probably *B. lichtensteini* (Peters).

29. TRAGELAPHUS SPEKII, sp. nov. (Pl. XII.)

T. obscure badius, fere unicolor, stria dorsali pallidior vix conspicua: auribus intus, macula nasali utrinque, duabus alteris subocularibus, et mento albidis: cauda elongata tenuiuscula, supra brunnea, subtus alba: ungulis valde elongatis: cornibus quoad formam T. euryceroti similibus, sed longioribus et gracilioribus, nigris, ad apicem albis.

Capt. Speke has obtained in Karagweh the horns of an adult and the imperfect skin and skull of a young male Antelope of the genus *Tragelaphus*, apparently belonging to a new species, which I propose to name provisionally after its discoverer.

The horns are hardly different, apparently, from those of *Tragelaphus euryceros*.

The fur is very long and coarse, as in *T. angasii*. The skin is of a uniform mouse-colour; front of head reddish; narrow dorsal streak



Tragelaphus spekii.

paler, with some whitish hairs; below lighter; tail darker; under-side and terminal tuft white; knees white; side of the cheek, chin, and front of upper lip white; horns diverging backwards at the tip.

The hoofs are excessively elongated; evidently specially adapted for traversing the reedy swamps which it inhabits.

This Antelope frequents the beds of Papyrus in the borders of the lakes of Karagweh. King Rumanika, of Karagweh, ordered his boatmen to catch me a specimen. They procured me a young male alive, the skin of which I brought home. I kept him some days alive, feeding him on Papyrus-tops, the only thing he would eat. He was very awkward on the hard ground, his long toes being evidently only adapted to carry him among the swamps. The king also gave me the horns of an adult of this Antelope. The skins of this animal are highly prized in Karagweh, Uganda, and Ungoro, and are worn by the kings and their officers.—J. H. S.

30. TRAGELAPHUS SYLVATICUS (Sparm.).

The head of a young male Antelope of this species.

The Bush-bok frequents the thick bushes in the countries we traversed, from Unyamuezi to Madi. It is usually found singly, and makes a bark when suddenly disturbed.—J. H. S.

31. OREAS LIVINGSTONII, sp. nov. (?).

Capt. Speke met with a small herd of about a dozen Elands at Inenge, in Usagara. He describes them as "head and horns like the common Eland, but more rufous on the forehead, with black points and a broad black band strongly marked on the hinder part of the fore legs, just above the bend of the knee." His figure represents the animal as having a very distinct black dorsal band, and seven or eight white cross stripes across the flanks. I have no doubt this is the same northern species of the Eland (*Oreas*) as that described in Dr. Livingstone's Travels.

Dr. Kirk informs me that he met with this Eland on the left bank of the Zambesi, in the neighbourhood of the Kafue, a large tributary of the former stream, and that it is readily distinguishable at first sight from the Common Eland (*Oreas canna*) by its striped flanks. I think there can be no doubt, therefore, as to its being a distinct animal; and I propose to name it after its discoverer, *Oreas livingstonii*.

32. STREPSICEROS KUDU, Gray.

The Koodoo was met with in Ugogo, at Ustuke, though no specimens were obtained; but I am certain of the species.—J. H. S.

33. BOS CAFFER.

Met with everywhere, where the grass is sufficiently heavy.—J. H. S.

34. CAMELOPARDALIS GIRAFFA.

The Giraffe is abundant everywhere in the countries we traversed, from the coast to Gondokoro, wherever the country affords it suitable haunts.—J. H. S.

Ordo VI. PACHYDERMATA.

35. PHACOCHÆRUS ÆLIANI.

Skulls of both sexes of this Wart-Hog.

Found in herds in Uzaramo and Mgunda Mkali; generally near water.—J. H. S.

36. HIPPOPOTAMUS AMPHIBIUS, Linn.

Abundant in the Kingani river and on the adjoining sea-coast, also in Lake Nyanza and the Nile.—J. H. S.

37. RHINOCEROS BICORNIS, Linn. }

38. RHINOCEROS SIMUS, Burchell. }

The Black Rhinoceros is very common throughout the whole country we traversed, down to Gondokoro. The White Two-horned Rhinoceros is found in Karagweh, where several specimens were shot. It is rather larger than the black animal.—J. H. S.

Ordo VII. PROBOSCIDEA.

39. ELEPHAS AFRICANUS.

Met with throughout the country, from the coast to Gondokoro.

2. ON THE BIRDS COLLECTED BY CAPT. J. H. SPEKE DURING
THE EAST-AFRICAN EXPEDITION. BY P. L. SCLATER; WITH
NOTES BY CAPT. J. H. SPEKE.

(Plate XIV.)

Capt. Speke having submitted to my examination all the bird-skins obtained during his recent successful expedition through Eastern Africa, I have had great pleasure in undertaking the task of the determination of the species. This, I may remark, has been rendered less easy by the imperfect state of many of the specimens, naturally resulting from the difficulties of collecting them in and transporting them through a hazardous and previously unknown country.

The specimens brought home by Capt. Speke, altogether about seventy in number, were all obtained between Bogamogo, opposite Zanzibar (6° 30' S. lat.), and Gondokoro on the Nile (5° N. lat.), and with very few exceptions before reaching Usui, in the countries of Uzaramo, Usagara, Ugogo, Unyamuezi, and Uzinza; so that on the whole they may be taken as characteristic of the East-African avifauna immediately south of the Equator.

The species represented in Capt. Speke's collection are sixty-two, namely :—

Accipitres.....	3	Columbæ.....	5
Passeres.....	27	Gallinæ.....	4
Fissirostres.....	10	Grallæ.....	3
Scansores.....	5	Anseres.....	5



Volf, del. et. lith

M & N Hanhart Imp

PSALIDOPROCNE ALBICEPS

This is of course a very small proportion of an avifauna which probably contains from 500 to 600 species*, if not more. But the collection is of value as being from a country of which we had previously no ornithological knowledge whatever, though hardly sufficiently extensive to allow even of deductions from it as to the general character of the fauna.

The following species in Capt. Speke's collection seem to be without doubt new:—

Bradyornis spekii.

Psalidoprocne albiceps.

Dryoscopus funebris.

Dryoscopus hamatus.

Vidua eques.

Of these, *Bradyornis spekii*, the two species of *Dryoscopus*, and *Vidua eques* have been already described by Dr. Hartlaub in the Zoological Society's 'Proceedings'†. I now proceed to give a systematic catalogue of the entire collection, with a description of the undescribed species. Capt. Speke has added such particulars as his note-book or his memory could supply concerning each of them.

It will be observed that the greater part of the species in Capt. Speke's collection are such as have already been noticed as belonging to the East-African Fauna. There are, however, a certain number of southern species (such as *Colius striatus*, *Numida mitrata*, &c.) intermixed.

Capt. Speke's remarks on each species are added, and indicated by his initials.

FALCONIDÆ.

1. FALCO TANYPTERUS, Licht.

Unyamuezi. One example: irides yellow. Shot at Kazeh by myself.—J. H. S.

2. HYPOTRIORCHIS SEMITORQUATUS (Smith).

Polyhierax semitorquatus, Smith, Ill. S. Afr. Zool. pl. 1.

Hypotriorchis castanonotus, Heuglin, Ibis, 1861, pl. 12.

One example, with the back slate-coloured, thus showing that Heuglin (Ibis, 1860, p. 407) is wrong in stating that all the northern examples are red-backed. See also 'Ibis,' 1861, p. 346.

Shot in Bogue, whilst sitting on a tree.—J. H. S.

3. MELIERAX MONOGRAMMICUS (Temm.).

M. musicus, P. Z. S. 1863, p. 105 (nec Dandin). This species was wrongly determined by me, and placed in Dr. Hartlaub's list of the birds collected by Capt. Speke at Kazeh, as *M. musicus*.

Irides yellow. Shot at Kazeh by myself, after it had just devoured a small lizard.—J. H. S.

* Rüppell's 'Systematische Uebersicht' gives 532 species as occurring in N.E. Africa, from Egypt to Abyssinia. Heuglin's Synopsis (in the Sitzungsberichte Akad. Wien for 1856) enumerates no less than 754 species.

† See P. Z. S. 1863, pp. 105, 106.

MOTACILLIDÆ.

4. MOTACILLA LUGUBRIS, Pallas.

Unyamuezi. Identified for me by Mr. Swinhoe, who has paid special attention to this group. See his remarks, 'P. Z. S.' 1863, p. 275.

5. BUDYTES FLAVA (Linn.).

A bad skin, referable to this species or one of its varieties. Unyamuezi.

TURDIDÆ.

6. BRADYORNIS SPEKEI, Hartlaub, P. Z. S. 1863, p. 105.

Kazeh. The "Morning Warbler," as I named this species, was met with at Meninga, in Unyamuezi. It came about our tents in the morning, and delighted us with its cheerful song, being the sweetest singing-bird we met with.—J. H. S.

7. CRATEROPUS JARDINII, Sw.

Shot at Bogue, in Uzinza, where I saw it flying about in flocks of from ten to twenty, which frequent the forests. Rather pugnacious in disposition.—J. H. S.

PYCNONOTIDÆ.

8. PYCNONOTUS NIGRICANS (Vieill.): Bp. Consp. p. 267.

The Bulbul of Unyamuezi: found all over the country, and well known as a songster.—J. H. S.

ORIOOLIDÆ.

9. ORIOLUS MOLOXITA, Rüpp.

Common in Uzinza, where I brought home one example. Irides red.—J. H. S.

HIRUNDINIDÆ.

10. PSALIDOPROCNE ALBICEPS, sp. nov. (Pl. XIV.)

P. nigra, pileo et gula summa albis.

Long. tota 5·5, alæ 4·2, caudæ rectr. ext. 3·1, rectr. med. 2·2 poll.

Capt. Speke has brought home in spirits from Uzinza a single example of this apparently new Swallow of the section *Psalidoprocne*. It seems to form a third of this little African group, which is distinguished from true *Hirundo* by its long cleft tail, short tarsi, small feet, and the saw-like margination of the outer edge of the first primary.

The two previously known species of the group are—

1. *P. holomelæna* (Sund.): *Hirundo holomelas*, Sund. Vet. Ac. Förh. 1850, p. 108: *Atticora hamigera*, Cassin, Proc. Acad. Phil.

1850, p. 57: *P. cypselina*, Cab. Mus. Hein. p. 48, ex Afr. occ. et merid.-orient.

2. *P. pristoptera* (Rüpp.): *Hirundo pristoptera*, Rüpp. Faun. Abyss. pl. 39. f. 2, ex Afr. orient.

This present species is easily known by its white head and throat.

MUSCICAPIDÆ.

11. *TCHITREA*, sp.?

Observed in Unyamuezi, Uzinza, and Uganda.

12. *BUTALIS*, sp.?

Uzaramo. A single specimen of an obscure species of this genus.

LANIIDÆ.

13. *BASANISTES CISOIDES* (Licht.): Hartl. P. Z. S. 1863, p. 105.

Shot in Bogue. Seen in small flocks. The present specimen shot while sitting on a village palisade.—J. H. S.

14. *LANIARIUS ICTERUS* (Cuv.).

Uzaramo. Shot by Capt. Grant. Irides reddish yellow. Found singly in the bush; has a single note with a hollow sound.—J. H. S.

15. *PRIONOPS POLIOCEPHALUS* (Stanley).

Usui, in Uzinza. Found in the small detached bushes.—J. H. S.

16. *DRYOSCOPIUS FUNERIS*, Hartl. P. Z. S. 1863, p. 105.

Two examples. Shot at Meninga.

17. *DRYOSCOPIUS HAMATUS*, Hartl. P. Z. S. 1863, p. 106.

Unyamuezi. Found in detached bushes.—J. H. S.

18. *DICRURUS*, sp.?

Kingcrows were rather common all over the Unyamuezi and Uzaramo countries, resembling in their habits the well-known Kingcrow of India (*D. macrocerus*).—J. H. S.

FRINGILLIDÆ.

19. *ALECTO DINEMELLI* (Horsf.): Bp. Consp. p. 638.

Shot at Tura, in Unyamuezi, where it goes about in small flocks.—J. H. S.

20. *EUPLECTES FLAMMICEPS*, Sw.

Meninga. Flies about in large flocks, feeding in the corn-fields, and roosting at night in the rushes in the swamps.—J. H. S.

21. *EUPLECTES IGNICOLOR* (Vieill.): Bp. Consp. p. 446.

Unyoro. Found in large flocks in the corn-fields (*Holcus sorghum*).—J. H. S.

22. *STEGANURA VERREAUXI*, Cassin, Pr. Acad. Phil. 1851, p. 56.
—*S. sphenura*, Bp. Consp. p. 449.

Meninga and Unyamuezi. Flies about on the tops of the Mimosas.—J. H. S.

23. *VIDUA EQUES*, Hartl. P. Z. S. 1863, p. 106, pl. 15.

Shot at Meninga. Seen in twos and threes among the corn and long grass.—J. H. S.

24. *VIDUA MACRURA* (Gm.): Bp. Consp. p. 448.

Found in the same locality as the last, and has the same habits.—J. H. S.

25. *HYPHANTORNIS LARVATUS*, Rüpp.

Textor larvatus, Bp. Consp. p. 440.

Uzaramo.

26. *HYPOCHERA NITENS* (Gm.): Bp. Consp. p. 510.

Unyamuezi. Common in the villages, feeding like Sparrows about the rows and heaps of dirt.—J. H. S.

27. *ESTRElda MINIMA* (Vieill.).

Unyamuezi. Found in flocks in company with the last species in the villages.—J. H. S.

28. *ESTRElda PHÆNICOTIS*, Sw.

Unyamuezi. Found in small flocks in the milk-bushes (*Euphorbia*) that in some places form the village fences; generally distributed in Unyamuezi.—J. H. S.

29. *SPERMESTES CUCULLATA*, Sw.

Unyamuezi. Found in the Euphorbias, like the previous species.—J. H. S.

30. *PASSER SWAINSONI*, Rüpp.

Unyamuezi and Karagweh. Frequents the villages like our House-Sparrow.—J. H. S.

UPUPIDÆ.

31. *IRRISOR CYANOMELAS* (Vieill.).

Uzaramo.

CORACIIDÆ.

32. *CORACIAS CAUDATA*, Vieill.: Sclater, P. Z. S. 1862, p. 12.

Bogue, in Uzinza.

33. *EURYSTOMUS AFER* (Lath.): Hartl. Orn. W. Afr. p. 28.

Uzaramo. Shot, on October 7th, 1860, a female with eggs partially developed in the ovary. Irides dark brown.—J. H. S.

MEROPIDÆ.

34. MEROPS ERYTHROPTERUS, Gm.

Shot at Meniuga.—J. H. S.

ALCEDINIDÆ.

35. HALCYON SENEGALENSIS (Linn.): Hartl. P. Z. S. 1863, p. 105.

Meniuga. Shot sitting on a tree over a brook.—J. H. S.

36. HALCYON CHELICUTI (Stanley).

This *Halcyon* seems to be the little *H. chelicuti*, not *H. variegata* (as entered in Dr. Hartlaub's list, P. Z. S. 1863, p. 105), from which, however, it only differs in its smaller size.

Bogue. Found in the forest.—J. H. S.

BUCEROTIDÆ.

37. BUCORVUS ABYSSINICUS (Gm.).

Unyoro. This Hornbill is found in flocks of four or five, feeding on the ground. When disturbed, they fly up into the trees. I saw them also in Madi.—J. H. S.

38. BUCEROS CRISTATUS (Rüpp.): Bp. Consp. p. 89.

A head, apparently of this species.

Only seen in Uganda, where it flies about in small flocks from tree to tree, and makes a very loud and harsh noise.

39. TOCCUS MELANOLEUCUS (Licht.).

Calao couromné, Levaill. Ois. d'Afr. p. 234.

Buceros coronatus, Shaw.

Two examples, young and adult. Dr. Kirk's collection from the Zambesi likewise contains examples of this species. In the young bird the bill is yellowish, and in two rather immature specimens shows a yellowish band towards the base.

CAPRIMULGIDÆ.

40. COSMETORNIS VEXILLARIUS (Gould).

Semiophorus vexillarius, Gould, Icon. Av. pl. in No. 2.

At first I was inclined to consider a single specimen of this species brought home by Capt. Speke different from the true *S. vexillarius* of Gould, and had intended to call it, after its discoverer, *S. spekii*, under which name it is figured in a woodcut in Capt. Speke's narrative of his expedition; I have, however, subsequently modified my opinion on this point. The only noticeable difference between the present specimen and Mr. Gould's figure is in the colour of the elongated ninth primary, which in Capt. Speke's bird has the inner

web brown like the outer, but in Mr. Gould's figure is represented as wholly white.

Dr. Kirk informs me this Goatsucker is very abundant on Lake Nyassa, and on the Zambesi at Tété. A specimen in his collection has the ninth elongated primary white on both webs at the base, but gradually passing into brown, showing that this is not a specific character.

This specimen was shot flying, after dark, in Uganda, at Urondogani. Others were often seen lighting on the bare ground in the clear patches near the villages, whence they flew off when disturbed. This bird was well known to my servant "Bombay," who said they were very common in Uhiyou, which is in 8° S. lat.—J. H. S.

MUSOPHAGIDÆ.

41. SCHIZORHIS PERSONATA, Rüpp.

This Touraco is rather common in the hilly country of Usagara. As in Somali-land, where I met with the same species*, it is found amongst the thorny Acacias in flocks of from four to five.—J. H. S.

CUCULIDÆ.

42. ZANCLOSTOMUS ÆREUS (Vieill.).

Uzaramo.

CAPITONIDÆ.

43. POGONORHYNCHUS TORQUATUS (Dumont).

Bucco torquatus, Dumont, ex Levaill. Barbus, pl. 28.

Apparently undistinguishable from the South-African species, of which there is an example in the British Museum, collected by Mr. Livingstone at Tété.

Uzaramo. Found among the upper branches of the highest trees.—J. H. S.

COLIIDÆ.

44. COLIUS STRIATUS, Gm.: Bp. Consp. p. 86.

Uzaramo. Also seen and shot higher up, in Usui. This bird is found in small flocks, frequenting the thickest bushes.—J. H. S.

PSITTACIDÆ.

45. PŒOCEPHALUS FUSCICAPILLUS (Peters).

Pionus fuscicapillus, Verr. Rev. Zool. 1849, p. 58.

Ps. cryptoxanthus, Peters, Monatsb. Ak. Berl. 1854, p. 371.

Uzaramo. Very common in flocks in Uzaramo and on the interior plateau. The example preserved was a female. "Irides dirty yellow."

* See Ibis, 1860, p. 245.

COLUMBIDÆ.

46. *TRERON DELALANDII*, Bp. Consp. ii. p. 6.

Uzaramo; and seen all along the route to Madi, in large flocks; affording very good food.—J. H. S.

47. *COLUMBA GUINEA*, Linn.

Shot at Kazeh and Meninga; but not observed elsewhere during the journey. Seen in flocks; resorting to roost in the "ginger-bread" palms.

48. *CHALCOPELIA CHALCOSPILOS* (Sw.): Rüpp. Syst. Ueb. pl. 38.

Obtained at Duthumi.—J. H. S.

49. *CHALCOPELIA AFRA* (Linn.).

Uzaramo.

50. *TURTUR SEMITORQUATUS*, Sw.

Very common all along the route from the coast to Kazeh, and thence north to Gondokoro.—J. H. S.

PTEROCLIDÆ.

51. *PTEROCLES*, sp.?

A bad specimen. Species uncertain.

Sandgrouse were seen in Unyamuezi and Ugogo, where this specimen was obtained.—J. H. S.

TETRAONIDÆ.

52. *PTERNISTES CRANCHII* (Leach).

Perdix cranchii, Leach, App. Tuckey's Voy.

A single skin of what seems most likely to be the male of this scarce species, which is at present only known by the typical example in the British Museum.

Native name, *Quali*, from its call. This bird is found in pairs, and breeding in covies from the coast up to Usui; and is abundant in many places. The throat is yellow; naked space round the eyes bright red.—J. H. S.

53. *FRANCOLINUS* —?

One example of a small Francolin, more like *F. gutturalis* of Rüppell than any other known species, but probably distinct. I do not venture to describe the specimen, it being imperfect and not very decided in its characters.

This Francolin is found in the forests all over Unyamuezi. I found young birds on the 20th February, near Kazeh, in company with the mother.—J. H. S.

PROC. ZOOL. SOC.—1864, No. VIII.

PHASIANIDÆ.

54. NUMIDA MITRATA, Pallas.

Uzaramo. This Guinea-fowl was common in flocks near the villages, and also in the jungle, from the coast as far as Bari. In Ugogo I also met with a second species, with a tufted head, and small spots on the feathers*.

Guinea-fowl afforded us a constant supply of food throughout our journey, when other meat was scarce.—J. H. S.

OTIDÆ.

55. OTIS MELANOGASTER, Rüpp.

This Floriken was seen occasionally in Unyamuezi, and on the heights of Karagweh. It haunts the grassy spots in twos or threes, and is rather shy. The example brought home was shot at Uron-dogani, in Uganda. The irides are yellow.—J. H. S.

ARDEIDÆ.

56. SCOPUS UMBRETTA, Linn.

The Umbrette is very common from the coast to Kazeh, frequenting the pools of water and ravines. It stands watching the water like a Heron, and on being disturbed flies up into a tree.—J. H. S.

RALLIDÆ.

57. LIMNOCORAX FLAVIROSTRIS, Sw. : Hartl. Orn. W. Afr. p. 244.

Uzaramo. Frequents the rice-fields, where the present specimen was shot.—J. H. S.

ANATIDÆ.

58. SARCIDIORNIS AFRICANA, Eyton : Hartl. Orn. West Afr. p. 247.

This Duck is very common all over Unyamuezi in the rainy season, frequenting the pools and lakes in considerable flocks.—J. H. S.

59. PLECTROPTERUS RUEPPELLI, Sclater, P. Z. S. 1859, p. 132, pl. 153.

Unyamuezi. Found on the lakes, whence it resorts to the rice-fields to feed.—J. H. S.

60. CAIRINA MOSCHATA, Linn.

This is the only tame Duck of Meninga and Unyamuezi generally. It has been introduced by the Arabs.—J. H. S.

61. DENDROCYGNA VIDUATA (Linn.).

Meninga. Shot flying, out of a large flock.—J. H. S.

* Probably *Numida pucheranii*, Hartl.—P. L. S.





62. PELECANUS, sp.

Head, perhaps, of *P. minor*, Rüpp.

Uganda; and common all the way down the Nile to Gondokoro.
—J. H. S.

3. ON THE REPTILES AND FISHES OBTAINED BY CAPT. SPEKE
DURING THE EAST-AFRICAN EXPEDITION. BY DR. A.
GÜNTHER.

(Plate XV.)

The Reptiles brought home by Capt. Speke consist of four specimens of Tortoises, belonging to the genera *Testudo*, *Kinixys*, and *Pelomedusa*. One of the species is new, and has been named by Dr. Gray *Pelomedusa spekii*.

The Lizards consist of two specimens of *Agama*, two of *Eremias*, one *Phelsuma*, and one *Tiliqua*.

The Snakes consist of one specimen of *Python sebae*, one of *Coronella*, two of *Psammophis*, one of *Bucephalus (capensis)*, three of *Ahaetulla (A. irregularis and A. natalensis)*, two of *Echidna (arietans)*, one of the black African Cobra (*Naja haje*), and one of a new and interesting species of *Causus*, which I have described* as new, with the following characters:—

“CAUSUS (HETEROPHIS) ROSTRATUS. (Pl. XV.)

“Rostral shield turned upwards, forming a prominent, sharpish transverse ridge above; scales in seventeen rows; a series of large spots along the back.

“The rostral shield has a flat oblique inferior surface, and forms above a curved, prominent transverse ridge; it terminates posteriorly in a triangular process intercalated between the front parts of the anterior frontals. The nostril is between three shields, viz. between a narrow longish anterior nasal, a small square posterior nasal, and the anterior frontal; the latter shield is larger and longer than the posterior, which is twice as broad as long. Vertical five-sided, rather large; occipitals small, shorter than vertical, truncated behind. Loreal square. The orbit is surrounded by four narrow shields (the supraorbital not included), so that none of the labials enter the orbit. Six upper labials; temporals 2+3. Scales small, smooth, in 17 rows. Ventrals 121; anal entire; subcaudals 15.

“Greyish olive above, with a vertebral series of subrhombic white-edged black spots; neck with a triangular blackish spot, the point of which is directed forwards, and resting on the vertical shield. Lower parts whitish, along the middle blackish.

“This interesting species was obtained in Ugogo. The single specimen is 10 inches long, the tail measuring 10 lines.”

Five specimens of fishes are in Capt. Speke's collection; but their imperfect state only enables me to say that one of them is of the genus *Clarias*.

* Ann. Nat. Hist. ser. 3. vol. xii. p. 363.

4. LIST OF THE SHELLS COLLECTED BY CAPT. SPEKE DURING HIS SECOND JOURNEY THROUGH CENTRAL AFRICA. BY DR. H. DOHRN.

The more we become acquainted with the African conchological fauna, the more the fact is proved that there is less variety of forms here than in any other part of the world. It has seemed hitherto that the west coast, especially the countries in the neighbourhood of the Gaboon and the mouth of the Niger, claimed a higher rank for conchological life than the rest; but the expeditions to Central Africa furnish us with materials sufficient to show that, in fact, this superiority does not exist, and we see the same species occurring near the east coast as well as on the borders of the Gulf of Guinea.

From Captain Speke's collection we find this statement to be quite true; and, what is more interesting still, we learn that up from the mouth of the Nile to the Victoria N'yanza, at a distance of more than 32 degrees of latitude, we meet with exactly the same species. It is not quite clear from the collection whether freshwater species hitherto considered peculiar to Mozambique occur in the Victoria N'yanza together with Nilotic shells, the specimens from different localities having been partly mixed up; but at least terrestrial species occur there which have likewise been found as far southwards as Tete and Quillimane, and others which have been brought from Old Calabar.

It is much to be regretted indeed that we cannot get full knowledge of the limits of South-African forms; however, we can state the general fact that the same species occur from Natal (and, on the other side, from the mouth of the Nile) to the Equator.

The following catalogue gives an idea of this mixture of the different faunas of Natal, Mozambique, Guinea, and Egypt, all the shells having been collected between the fourth degree of southern and the fourth degree of northern latitude:—

1. *VITRINA*, sp.? The specimens being in a very bad state, it was not possible to make out the species.

2. *NANINA*? *MOZAMBICENSIS*, Pfr. From Uzaramo and the banks of the Victoria N'yanza. The typical specimen in Mr. Cuming's collection is not full-grown. The shell has got seven whorls, the white keel is prominent on the last four whorls. The diameter of the largest specimen is 17 millimetres.

3. *LIMICOLARIA* (*BULIMUS*) *NILOTICA*, Pfr. From Uganda and Karagwá.

4. *LIMICOLARIA FLAMMEA*, Müll. From the same localities. I have tried in vain to find out differences of this and the following species from the West-African type. In the collection are two varieties, one white, the other rose with pale-brown flames.

5. *LIMICOLARIA TENEBRICA*, Reeve. From Uganda.

6. *ACHATINA SPEKEI*, Dohrn, n. sp.

Testa oblonga, solidula, superne obsoletissime granulata, sub epidermide cornea albida, irregulariter fulvo strigata; spira conica, apice obtusula, sutura submarginata; anfr. 6-7, convexiusculi, ultimus $\frac{3}{4}$ longitudinis æquans; columella oblique truncata, arcuata, callo tenui induta; apertura oblongo-ovata.

Hab. Ad lacum Victoria N'yanza.

Accedit ad *Achatinam ustulatam* Lamarckii, a qua præcipue spira graciliore, apice tenuiore, anfractibus superioribus convexioribus, columella magis arcuata differt.

7. *CYCLOSTOMA CALCARIUM*, Sow. Locality doubtful.✓ 8. *LIMNÆA*, sp., and

✓ 9. *PLANORBIS*, sp. From the Victoria N'yanza and the White Nile, as far down as 4° of N. latitude.

10. *PHYSOPSIS AFRICANA*, Krauss. Mixed up with Nilotic shells; but I suspect it is probable that this South-African species has been found in the Kingani River.

11. *LANISTES PURPUREUS*, Jonas, and

12. *LANISTES OVUM*, Peters. Probably from the Kingani River.

? 13. *LANISTES BOLTENIANUS*, Chemn. From the Nile and the Victoria N'yanza. The specimens are larger than those previously found further down the river.

14. *AMPULLARIA SPECIOSA*, Phil. From the Kingani River.

15. *NAVICELLA PORCELLANA*, Linn. From Johanna Island, Zanzibar.

✓ 16. *PALUDINA UNICOLOR*, Oliv., and

✓ 17. *PALUDINA BULIMOIDES*, Oliv. From the Victoria N'yanza and the White Nile. Of the latter species there is a gigantic specimen from the lake, more than twice as long as usual.

18. *MELANIA TUBERCULATA*, Müll., and

19. *CORBICULA FLUMINALIS*, Müll. Both probably from the Nilotic district.

20. *UNIO CAILLAUDI*, Fér., and

21. *UNIO ÆGYPTIACUS*, Caill. Are known as Nilotic species.

22. *UNIO MOSSAMBICENSIS*, Peters. Has been described from the Zambezi, where it lives together with the following species.

23. *SPATHA PETERSI*, Martens.

24. *SPATHA WAHLBERGI*, Krauss. Known from the Limpopo River in Caffraria.

25. *SPATHA DUBIA*, Gmel., and

26. *SPATHA RUBENS*, Lam. Both common Nile shells.

27. *ETHERIA CAILLAUDI*, Fér. Confined to the Upper Nile.

These species form the present collection. Two of them, *Limicolaria flammea* and *L. tenebrica*, are known from the coast of Guinea; seven are South-African types, viz. *Nanina mozambicensis*, *Physopsis africana*, *Lanistes purpureus* and *L. ovum*, *Unio mossambicensis*, *Spatha petersi*, and *S. wahlbergi*; two are distributed over Egypt, Syria, and a great part of Asia—*Melania tuberculata* and *Corbicula fluminalis*; *Navicella porcellana* is known from several islands near the African coast; *Limicolaria nilotica*, *Achatina spekei*, *Cyclostoma calcarium*, and *Ampullaria speciosa* seem to belong to the equatorial parts of East Africa; and all the rest are known from the Nile and from Egypt.

5. LIST OF INSECTS COLLECTED BY CAPT. SPEKE DURING THE EAST AFRICAN EXPEDITION. BY FREDERICK SMITH.

COLEOPTERA.

GEODEPHAGA.

Anthia striatopunctata, Guér.

Polyhirma polioloma, Chaud.

Scarites procerus, Klug.

HYDRADEPHAGA.

Dineutes africanus, Aub.

LAMELLICORNIA.

Rhizotrogus —?

Gymnopleurus profanus, Latr.

Trox —?

HETEROMERA.

Pimelia? —?

Tentyria —?

Adesmia —?

New genus (*Scotinus*)?

Epicauta gigas, Westw.

RHYNCHOPHORA.

Cleonus —.

LONGICORNIA.

Purpuricenus, new sp.

HYMENOPTERA.

Formica longipes, Gerst.

Ponera pestilens, Smith.

Dorylus helvolus, Linn.

Mutilla guineensis, Fabr.

M. bilunata, Gerst.

FOSSORES.

Ammophila —?

DIPTERA.

Dexia (new subgenus).

Asilus —?

Bengalia —?

Chrysomyia clara.

Tabanus —?

ORTHOPTERA.

Mantis —.

Acridium —.

Phymateus squarrosus.

Heterodes servillei, Reich.

Truxalis —?

Acheta (2 species).

Pamphagus —?

Polyzosteria —?

HEMIPTERA.

Polymerus —.

Odontopus sexpunctatus.

Dysdercus albicollis.

MYRIAPODA.

Spirobolus pulvillatus.

Eurydesmus oxygonus, Peters.

Ixodes, 2 species.

Spirostreptus gigas, Peters.

ARACHNIDA.

Mygale, sp.?

6. ON THE SPECIES OF THE AMERICAN GENUS COCCYZUS.
 BY P. L. SCLATER, M.A., PH.D., F.R.S., ETC.

In my 'Catalogue of American Birds' (pp. 322-3) I arranged, for convenience' sake, the species of the genus *Coccyzus* of Vieillot in my collection in two groups according to the colour of their bills, placing in one division the species with the base of the lower mandible *yellow*, as in the well-known *C. americanus*; in the other those with the whole bill *black*, as in the equally well-known *C. erythrophthalmus*. In my collection I had at that time three well-distinguished species of each of these two groups, namely,

Rostro partim flavo.	Rostro nigro.
1. <i>C. americanus</i> .	4. <i>C. erythrophthalmus</i> .
2. <i>C. dominicus</i> .	5. <i>C. melanocoryphus</i> .
3. <i>C. seniculus</i> .	6. <i>C. pumilus</i> .

Mr. A. Newton having kindly presented me with a Cuckoo from Jamaica, which appears to belong to new species of the yellow-billed section, I have lately taken the opportunity of examining again the examples of this genus in my own collection and also those in the British Museum, and I have drawn up the following notes upon the subject.

In the lately published fourth part of the 'Museum Heineanum' of MM. Cabanis and Heine, in which this group is treated of (p. 75 *et seq.*), all the six species above enumerated are admitted as valid under the same names as those I had employed for them, except the second, which I had called *dominicus*. For this Antillean species (the *C. seniculus* of Gosse) MM. Cabanis and Heine propose the new name *nesiotes*, alleging that it is not the true *Cuculus dominicus* of Linné, but that that term (founded upon Brisson's *Cuculus dominicensis**) is nothing more than a synonym of *Coccyzus americanus*. Upon again considering this matter, and referring to the older authorities, I must confess I was probably wrong, in identifying the Jamaican *Coccyzus seniculus* of Gosse with Linnæus's *C. dominicus*. Indeed I had already bestowed on this bird a new name in my MSS. and collection, and only subsequently altered it to *dominicus*, in order to save giving the bird a fresh appellation, when I thought I could make an old one do. I therefore adopt MM. Cabanis and Heine's name *nesiotes* for this insular species, which may be readily distinguished from the true *Coccyzus seniculus* by its smaller size, as observed by Mr. E. C. Taylor (*Ibis*, 1864, p. 170).

Again Prof. Baird, in his remarks upon the collection of birds made by Mr. Morel in Jamaica (*Proc. Acad. Phil.* 1864, p. 154), applies Brisson's term *dominicus* to a species of the yellow-billed section, which, although no description is given, I can hardly doubt is the same as the new species I now propose to describe; so that our respective attempts to employ old names instead of new ones may, I

* Orn. iv. p. 110.

fear, result in some confusion, unless steps are taken to explain how the matter stands, as I now propose to do in the following list of all the species of the group, as far as I am acquainted with them.

I may remark that there is one species, given in Cabanis and Heine's account of the group, which I have not yet come across. This is *Coccyzus cinereus*, Vieillot, founded upon Azara's "*Ceniciento*" (Pax. ii. p. 368). There is stated to be an example of this bird in the Berlin collection obtained by Sello in Monte Video.

The following diagnoses are for the more easy identification of the eight species which I have examined :—

A. rostro inferiore ad basin flavo.

- | | | |
|---|--|------------------------|
| a. ventre albo, | { major, alis extus rufis | 1. <i>americanus</i> . |
| | { minor, alis extus dorso concoloribus | 2. <i>bairdi</i> . |
| b. ventre fulvescente, minor, subtus dilutior | | 3. <i>nesiotes</i> . |
| major, subtus saturatior | | 4. <i>seniculus</i> . |

B. rostro toto nigro.

- | | |
|--|------------------------------|
| a. fuscus, pileo dorso concolore | 5. <i>erythrophthalmus</i> . |
| b. fuscus, pileo cinereo, { corp. subtus fulvescente | 6. <i>melanocoryphus</i> . |
| { pect. rufo, ventre albo | 7. <i>pumilus</i> . |
| c. rufus, pileo plumbeo, subtus flavo-ferrugineus | 8. <i>landsbergi</i> . |

I now add the principal synonyms and geographical ranges of each species :—

A. *Species rostro inferiore partim flavo.*

1. COCCYZUS AMERICANUS.

Cuculus americanus, Linn. S. N. i. p. 170.

Cuculus carolinensis, Wils. Am. Orn. iv. p. 13, pl. 28. f. 1.

Coccyzus pyrrhopterus, Vieill. Enc. Méth. p. 1343.

Coccyzus americanus, Bp. Consp. p. 111; Sclater, P. Z. S. 1860, p. 252; Newton, Ibis, 1859, p. 149.

Coccygus americanus, Baird, B. N. Am. p. 76; Cab. et Hein. Mus. Hein. iv. p. 75.

Hab. North America, Eastern States to Missouri plains (*Baird*); Jamaica (*Gosse*); S. Croix (*Newton fr.*); Trinidad (*Brit. Mus.*).

Mus. Brit. et P. L. S.

2. COCCYZUS BAIRDI, sp. nov.

Coccyzus dominicus, Baird, Pr. Acad. Sc. Phil. 1863, p. 154 (nec Brisson, nec Sclater).

Similis C. americano, sed minor, subtus magis candidus, supra alis extus dorso fere concoloribus, colore fulvo vix extus apparente et caudæ rectricibus 3 extimis albo terminatis, quarto pare ad ipsum apicem vix albo limbatis.

Long. tota 9·5, alæ 25·3, caudæ 5·3 poll. Angl.

Hab. In Jamaica.

Mus. P. L. S.

The single specimen which I possess of this species has been kindly presented to me by Mr. Alfred Newton. It formerly formed one of a small collection of birds obtained in Jamaica by the Rev. J. M. Philipps, of Spanish-town, and sent by him to Mr. J. H. Garney.

I have little doubt that it is the species called by Prof. Baird (*l. c.*) *Coccyzus dominicus*, a name which I have already given my reasons for rejecting. It is not, however, Gosse's Yellow-billed Cuckoo (Birds of Jamaica, p. 279), as suggested by Prof. Baird; for I have one of Mr. Gosse's specimens in my collection, and that is the true *Coccyzus americanus*. Mr. Gosse also states that his May-bird is but a summer visitor to Jamaica; whereas Mr. March tells us (referring, as I suppose, to *Coccyzus bairdi*) that this bird "is a constant resident in the island, and more common in the lowlands during the summer than *C. seniculus* (i. e. *Coccyzus nesiotus*). It breeds from March to July, and builds in the low branches of trees or shrubs. The nest is a structure of a few dry sticks, so loosely put together that it falls to pieces on any attempt to remove it: three, rarely four, eggs are laid; they are glaucous green, oval, generally (though not always) round at both ends, and vary in size from $1\frac{1}{4}$ by $\frac{7}{8}$ to $1\frac{3}{8}$ by 1 inch."—*Proc. Acad. Phil.* 1863, *l. c.*

3. COCCYZUS NESIOTES.

Coccyzus seniculus, Gosse, B. Jam. p. 281; Newton, Ibis, 1859, p. 150; Sallé, P. Z. S. 1857, p. 234; Sclater, P. Z. S. 1861, p. 79 (nec Lath.).

Coccygus minor, Baird, B. N. Am. p. 78.

Coccyzus dominicus, Sclater, Cat. Am. B. p. 323.

Coccyzus nesiotus, Cab. et Hein. Mus. Hein. iv. p. 78; Taylor, Ibis, 1864, p. 170.

Hab. Jamaica (*Gosse et Osburn*); St. Croix (*Newton*); St. Domingo (*Sallé*); Porto Rico (*Taylor*).

Mus. Brit. et P. L. S.

4. COCCYZUS SENICULUS.

Cuculus minor!, Gm. S. N. i. p. 411 (ex Buff. Pl. Enl. 813).

Cuculus seniculus, Lath. Ind. Orn. i. p. 219.

Coccyzus seniculus, Vieill. Enc. Méth. p. 1346; Sclater, Cat. Am. B. p. 323; Taylor, Ibis, 1864, p. 170.

Coccyzus helviventris, Cab. in Schomb. Guian. iii. p. 714.

Coccyzus seniculus, Cab. et Hein. Mus. Hein. iv. p. 78.

Hab. Guiana (*Schomb.*); Cayenne; Trinidad; Chiriqui (*Capt. Kellett*); Dominica (*Taylor*); Guadeloupe et Martinique (*Mus. Paris*).

Mus. Brit. et P. L. S.

I have compared my skin of this species with others in the British Museum from Chiriqui, Cayenne, and Trinidad, and believe them identical. The Chiriqui specimen is rather paler below. Mr. Taylor's examples from Dominica are not different.

B. *Species rostro nigro.*

5. COCCYZUS ERYTHROPHTHALMUS.

Cuculus erythrophthalmus, Wils. Am. Orn. iv. p. 16, pl. 28. fig. 2.

Coccyzus erythrophthalmus, Bp. Consp. p. 111; Sclater, P. Z. S. 1859, p. 252, et Cat. Am. B. p. 323.

Coccygus erythrophthalmus, Baird, B. N. Am. p. 77; Cab. et Hein. Mus. Hein. iv. p. 76.

Hab. Eastern United States to Missouri plains (*Baird*); Mexico (*Sallé*); Guatemala (*Salvin*); Panama (*McCleannan*); Bogota; Ucayali (*Hauxwell*).

Mus. Brit. et P. L. S.

This bird ranges all through Central America and New Granada into the valley of the Amazon. I have compared specimens from all the localities above given, and believe them identical.

6. COCCYZUS MELANOCORYPHUS.

Coccyzus melanocoryphus, Vieill. Nouv. Dict. viii. p. 271, et Enc. Méth. p. 1344; Sclater, Cat. Am. B. p. 323.

Cuculus melanorhynchus, Cuv. in Mus. Par.; Less. Tr. d'Orn. i. p. 141.

Cuculus seniculus, Max. Beitr. iv. p. 348.

Coccyzus seniculus, Burm. Syst. Ueb. ii. p. 267.

Coccygus melanocoryphus, Cab. et Hein. Mus. Hein. iv. p. 77.

Hab. S.E. Brazil; Ucayali (*Hauxwell*).

Mus. Brit. et P. L. S.

I am not sure about the locality of the specimen of this species in my collection said to be from Cayenne. It would seem to be a more southern species. Cabanis and Heine say, "Brazil, Paraguay, Monte Video, and La Plata." Hauxwell's skin from the Ucayali is certainly referable here,

7. COCCYZUS PUMILUS.

Coccyzus pumilus, Strickl. Orn. Contr. 1852, p. 28, pl. 82; Sclater, Cat. Am. B. p. 323; Cab. et Hein. Mus. Hein. iv. p. 79.

Hab. Trinidad.

Mus. Brit. et P. L. S.

8. COCCYZUS LANDSBERGI.

Coccyzus landsbergi, Bp. Consp. p. 112; Cab. et Hein. Mus. Hein. iv. p. 79.

Hab. New Granada, Santa Martha.

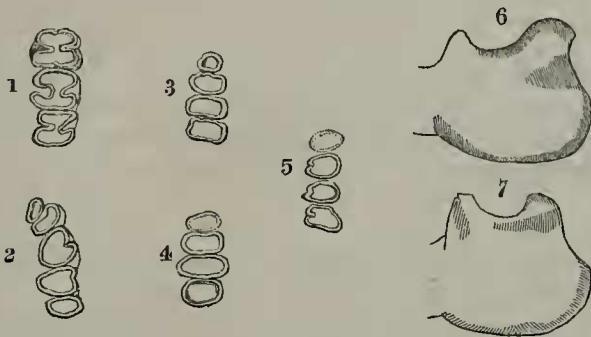
A fine specimen of this well-marked species is in the British Museum. It was received through the Messrs. Verreaux of Paris from Santa Martha, in New Granada. Bonaparte gives "*Bogota*" as the locality; but I have examined many thousands of Bogota skins, and have never seen a specimen of this bird amongst them. Bonaparte's diagnosis of this species is quite accurate.

7. NOTES ON THE SPECIES OF SAND-MOLES (GEORYCHUS).

BY DR. J. E. GRAY, F.R.S., ETC.

Dr. Selater having requested me to determine two Sand-Moles (*Georychus*) brought home by Capt. Speke, I have been induced to re-examine all the specimens of the genus in the British Museum.

The species may be divided into two groups according to their fur. Thus the fur of *G. capensis*, *G. albifrons*, and *G. unicolor* is very similar, being soft, long, and fluffy; while the fur of *G. cæcutiens*, *G. damarensis*, and *G. holosericeus* is also much alike, but differs from the fur of the other species in being shorter, rather more rigid, apparently closer.



The genus may be divided into four groups by the form of the grinders, thus:—

A. Grinders $\frac{3-3}{3-3}$. The crown of the upper and lower grinders nearly square, with a fold or groove on the inner and outer edges. GEORYCHUS. (Fig. 1.)

1. GEORYCHUS CAPENSIS, Gray, Cat. B.M. p. 148; see Waterhouse, Ann. N. H. viii. t. 2. f. 2.

The perforation on the side of the skull in front of the orbit oblong, subtrigonal, almost as wide as high; forehead with a slight wing-like expansion over the front of the orbit; the hinder wing of the lower jaw longer than high, with a slightly rounded outline beneath. (Fig. 6.)

Hab. Cape of Good Hope.

2. GEORYCHUS ALBIFRONS, n. s.

Fur ashy grey, with a large white spot on the forehead.

Hab. E. Africa (Capt. Speke).

This species is very like *G. capensis*, both in the colouring of the fur and in the form of the grinders, but is not more than one-third the size, and it has a large white spot on the forehead, and no white on the cheeks. There is the same difference in the size of the skull; and the teeth are more worn, showing that it is as old. The brain-box of the skull is much more ventricose. The teeth have a distinct

fold on the inner side, but scarcely so on the outer; but then they are much worn. The expansion on the hinder part of the lower jaw is nearly of the same form as that of *G. capensis*.

Dr. Peters, in his 'Nat. Reise nach Mossambique,' t. 35. f. 3, gives a figure of the top of what he believes to be a young specimen of *Bathyergus cæcutiens*. It is something like the skull of this species; but it may be the skull of the species to which Dr. Peters refers it, for unfortunately the teeth, which would determine the question, are not figured.

B. Grinders $\frac{4-4}{4-4}$. Crown of the front upper small, oblong, transverse, simple; of second, third, and fourth subtrigonal, with a distinct fold or groove on the broader inner side; the second tooth the smallest: the first lower oblong, small; the second square; the third trigonal; the hinder side the smallest, with a subtrifoliate crown. The hinder wing of the lower jaw broad, nearly as high as wide, with a strongly arched outline below. HELIOPHOBIUS, Peters. (Figs. 2 & 7.)

3. GEORYCHUS PALLIDUS. (Teeth, fig. 2; jaw, fig. 7.)

Rufous grey; side of face, chin, and beneath paler yellow-grey.

Hab. E. Africa (Capt. Speke).

I have very little doubt that this is the animal figured by Dr. Peters (Reise nach Mossambique, t. 31) under the name *Bathyergus argenteo-cinereus*, and of which the skull is the skull figured as *Heliophobius argenteo-cinereus* (t. 35. f. 2), and described under the latter name in the 'Bericht,' 1846, p. 159; but he specially describes it as having six grinders in each jaw, where we have only four. I think that must have been an anomaly in his specimen; indeed the figure does not show six well-formed teeth.

Dr. Peters describes, and his figure represents, the fur as of a uniform colour. Our specimen is paler on the cheeks and underpart of the body.

C. Grinders $\frac{4-4}{4-4}$, all nearly similar and of nearly equal size, the hinder being only slightly the smallest. The crown of the upper ones is oblong, rounded, and with a central fold on the outer side. The crown of the lower with a fold in the middle of each side, the outer fold of the last one being almost, if not quite, obsolete on the outer side. The wing of the hinder part of the lower jaw longer than high, with a nearly straight lower edge. CRYPTOMYS. (Figs. 3 & 6.)

4. GEORYCHUS HOLOSERICUS, Wagner.

Hab. S. Africa.

D. Grinders $\frac{4-4}{4-4}$. The upper grinders oblong, transverse, wider than long, the front the largest; the hinder very small, nearly

circular. The lower grinders oblong, much wider than long; the three front subequal; the hinder smaller, nearly circular. The posterior wing of the lower jaw longer than high, with a nearly straight lower margin. CÆTOMYS. (Figs. 4 & 6.)

5. GEORYCHUS CÆCUTIENS, Gray, Cat. Mam. B.M. 149. (Teeth, fig. 4.)

Bathyergus cæcutiens, Licht.

? *B. hotentottus*, Lesson.

? *B. ludwigii*, A. Smith.

Fur short, close, uniform grey-brown; the perforation on the side of the nose in the front of the orbit large, oblong, erect.

Hab. Natal.

6. GEORYCHUS DAMARENSIS, Gray, Cat. Mamm. B. M. 149. (Teeth, fig. 5.)

Bathyergus damarensis, Ogilby, P. Z. S.

Fur short, uniform grey-brown, with a large white spot on the back of the head.

Hab. Damara-land.

This animal greatly resembles the preceding, but is larger, and has the white spot on the back of the head. The imperfect skull (with part of the teeth) in the Museum resembles the skull of the preceding in most particulars, but is rather larger in size, and the perforation in the side of the nose, at the front edge of the orbit, is smaller and not so oblong, being only a little higher than wide.

8. ADDITIONAL OBSERVATIONS ON DERMATEMYS, A GENUS OF EMYDIDÆ FROM CENTRAL AMERICA. BY DR. J. E. GRAY, F.R.S., ETC.

In the 'Proceedings of the Zoological Society' for 1847, p. 53, I described a new genus of *Emydidæ*, under the name of *Dermatemys mawii*; and in the 'Catalogue of Shield Reptiles in the British Museum' I figured the shell of the animal in detail.

This genus was only established on a single shell, without any part of the animal attached to it, which was then in the Museum of this Society, having been presented by Lieut. Mawe, R.N. This specimen has since been transferred to the collection of the British Museum.

Some doubts have been expressed as to the position of the genus in the family *Emydidæ*; and one naturalist has even gone so far as to doubt the propriety of establishing a genus from the examination of the single specimen, which he was inclined to believe was only an abnormal form of a typical *Emys*. This I could not admit; for, even if it were an accidental monstrosity, we did not know an *Emys* to which it could be referred.

M. Bibron, when in England, named the specimen in the MS. Catalogue of the Zoological Society *Emys mawii*, a name which I adopted when I originally described it.

More lately the Museum at Paris appears to have received a specimen with the animal, for I find it shortly noticed in M. A. Duméril's 'Catalogue of the Paris Museum' under the name of *Emys berrardi*, with the following account of the animal:—"Head uniform brown, flat, broad, rather large; jaws toothed; toes broadly webbed; tail strong, rather long." It was sent from M. Berrard from Vera Cruz. *Emys berrardi* is also described and figured by A. Duméril in the sixth volume of the 'Archives du Muséum,' p. 231, t. 15.

It is to be observed that in the short notice of the species in the 'Catalogue of the Paris Museum' the series of large shields on the external symphysis, which is a peculiarity of *Dermatemys mawii*, is not mentioned; and they are to be looked for in vain in the longer description in the 'Archives du Muséum,' or in the plate which accompanies that paper. Yet there can be no doubt that both the descriptions and figure are intended for the animal under discussion, as M. Duméril admits that they received one specimen from Lieut. Mawe, or "Maw," as it is printed, which no doubt they obtained from the Zoological Society when M. Bibron was in London. However, the figure is more beautiful as a work of art than accurate as a natural-history drawing; but then herpetologists must by this time have become accustomed to M. Auguste Duméril's want of attention to such details.

Professor Agassiz, probably deceived by these inaccuracies, observed:—"E. berrardi seems to belong to the genus *Ptychemys*, judging from the description and figure of the jaws." (Contrib. p. 432.)

In Mr. Salvin's collection there is a specimen of this Tortoise, with the animal; but, unfortunately, the specimen is not well preserved: it seems to have been allowed to get dry from evaporation of the spirit, and then to have been placed in spirit again. However, it is in a sufficiently good condition to allow of a description of the more prominent characters of the animal; and it shows that the peculiar disposition of the sternal plate, on which the genus was described (though overlooked by M. Duméril), belongs to the normal characters of the animal. The head is rather large, flat above, and covered with a soft, thin, continuous skin; the nose shelving upward, conical; nostril terminal; mouth inferior, considerably behind the end of the nose; beak horny, rather sinuated at the sides; chin not bearded; the limbs strong, well developed; the legs covered with small scales; the front of the fore legs with numerous, unequal, very slender, band-like cross shields; feet large, broad; the toes very long, rather slender, with a wide web to the base of the claws; the outer edge of the fore leg and foot, and the hinder edge of the hind leg and foot, with a broad thin fringe, covered with large smooth plates; the claws 4—5, elongated, acute; tail short, thick, angular, the upper surface flat, granular, with a ridge on each side of the base con-

verging towards the centre, where the ridges unite and form a single central ridge of granules to the horny tip of the tail.

This genus has all the characters of the more typical aquatic Terrapins. The feet are broad, the toes elongated and well webbed; and the alveolar edges of the jaws, according to the figure of M. A. Duméril (*l. c.* t. 15), have distinct dentated ridges, like the genera *Pseudemys* and *Batagur*. M. Duméril's figure seems to have been taken from a badly preserved stuffed specimen. There is a second specimen of this very interesting Terrapin now alive in the Zoological Gardens.

In my description of the genus I have described the axillary and inguinal plates as absent. In Mr. Salvin's specimen they are very small, but yet distinctly present, but are more developed on one side than on the other, showing that they are variable in this animal.

9. DESCRIPTION OF A NEW SPECIES OF STAUROTYPUS (*S. SALVINII*) FROM GUATEMALA. BY DR. J. E. GRAY, F.R.S., ETC.

Among the interesting series of Tortoises brought by Mr. Salvin from Haumanchal, Guatemala, and deposited in the British Museum, are two specimens of a Tortoise of the genus *Staurotypus*, but differing from the normal form of that genus in the sternum being narrowed and acute in front, like the sternum of *Chelydra*, which genus it resembles in having a crested though short tail.

I would propose to divide the genus thus:—

A. *Sternum broad and truncated in front.* STAUROTYPUS.

1. STAUROTYPUS TRIPORCATUS, Gray, Cat. Shield Rept. B. M. 47, t. 20 b.

Hab. Mexico (*Wiegmann*); Vera Cruz (*Sallé*).

B. *Sternum narrow, tapering, acute in front.* STAUREMYS.

This subgenus has the form of the sternum and the crested tail of *Chelydra*, with the sternal shields of *Staurotypus*.

2. STAUROTYPUS (*STAUREMYS*) SALVINII.

Hab. Haumanchal, Guatemala (*Salvin*).

Head very large, swollen, crown covered with a thin soft skin; face conical, rather produced; nose terminal; mouth inferior; beak large, dentated on the edge; chin with two beards; throat warty; skin of body and limbs granular; the fore legs have several slender, very broad, arched, band-like shields across the inner side, the middle one being the broadest; toes well developed, strong; upper surface covered with a single series of band-like shields, united to the claws by a wide, well-developed web; claws 4—5, strong, elongate, acute; tail short, conical, angular above, with a central

and a lateral series of tubercles, forming three short crests; the thorax oblong, covered with three short, continuous keels; marginal shields rather narrow, elongate; sternum cross-like, small compared with the dorsal disk, narrow, slightly rounded before, acute behind, united to the dorsal disk by a narrow lateral process; sternal plates seven, thin, four pairs and a single odd one behind; the first pair elongate, longer than broad (probably the two first pair of other *Emydæ* united); the second pair broad, produced on the side, so as to cover the greater part of the cross-like sternum; the third pair elongate, narrow; the hinder plate rhombic, rather longer than broad, acute in front and behind; the axillary and inguinal plate large, covering the space between the outer lateral edge of the second pair of shields and the marginal plates. The front lobe of the sternum is very moveable at the suture between the first and second pairs of sternal plates, in the young specimen, and has a considerable amount of mobility in the adult specimen.

The shell is brown; the head is dark olive; the temple and the side of the neck pale-marbled; underside of the limbs whitish.

Wagler represents the anal shields of *S. triporcatus* as divided. In the large specimen in the British Museum they are united into a single rhombic shield, as in *S. salvinii*.

10. ON THE GENERA OF CHELYDIDÆ AND THE CHARACTERS
FURNISHED BY THE STUDY OF THEIR SKULLS. BY DR.
J. E. GRAY, F.R.S., ETC.

It has been very generally observed that the characters which separate the genera of the family *Chelydidæ* are very slight. This only arises from the genera having been hitherto characterized by some easily seen external peculiarities, which are often, as in this case, mere superficial indications of very different internal organizations.

This apparent slowness disappears when the skulls and other parts of the skeletons of the different genera are examined, as may be proved by consulting the figures of the skulls and skeletons given in the Atlas of Plates to Wagler's 'System of Amphibia,' published in 1830, which has been too much neglected by more recent writers on the subject.

Unfortunately we have the bones of only a few examples of the family in the collection of the British Museum, and there are only two skeletons in the Museum of the College of Surgeons; nor do I know of any other osteological collections which have more. These, however, and the figures of Cuvier and Wagler before referred to, are sufficient to show the outlines of an improved arrangement of the genera, and to afford more important characters for them.

I refer to my 'Catalogue of the Shield Reptiles in the British Museum' for the description of the species and more lengthened generic characters, and to the articles by me in the 'Proceedings of

the Zoological Society' for some additional observations on certain genera.

The typical *Chelydidæ* form the first section.

A. *Head depressed, covered with a soft skin, which is sometimes more or less divided on the surface into numerous polygonal plates. The skull depressed, without any or only a very rudimentary zygomatic arch. Temporal depression large, with a more or less wide bony arch at the back, from the ear-bones to the middle of the occiput; the temporal muscles only covered with a skin. Lower jaw weak, slender. The alveolar surface of the jaws thin, with a more or less distinct submarginal ridge. Typical CHELYDIDÆ.*

a. *The head very much depressed; beak covered with flesh; lips bearded. Skull very depressed, abnormal; temporal muscles very large, only covered with skin, without any central bony crown to the head; auri-occipital arch very slender, small; lower jaw very slender, weak. CHELYDINA.*

1. CHELYS, Daud.; Gray, Cat. Shield Rept. 60.

Matamata, Merrem.

CHELYS MATAMATA, Gray, l. c. 60.

Skeleton in Mus. Coll. Surg. no. 960, described by Owen, Cat. p. 187. Figured in Wagler's N. S. Amph. t. 3. f. 5, 15. Skull figured in Cuvier's Oss. Foss. v. 2, t. 11. f. 21-25, t. 12. f. 41.

b. *Head rather depressed, not fringed; beak naked; chin sometimes bearded; skull rather depressed, of normal form, with a distinct central bony crown, and a more or less strong auri-occipital arch; the auri-occipital arch very slender, weak; the temporal depression very large, covered with skin, separated by a very narrow ridge-like crown; shell very depressed, thin. HYDRASPIDINA. (Fig. 1.)*

2. HYDRASPIS, Gray, l. c. 54.

Intergular and nuchal plate on the margin. Chin two-bearded. Auri-occipital arch distinct.

Hab. Tropical America.

* *Head very large, depressed, with small tessera.*

1. HYDRASPIS RANICEPS, Gray, l. c. 55. t. 23. (Skull, figs. 1, 2.)

Hab. Brazil.

Skeleton in British Museum.

Fig. 1.

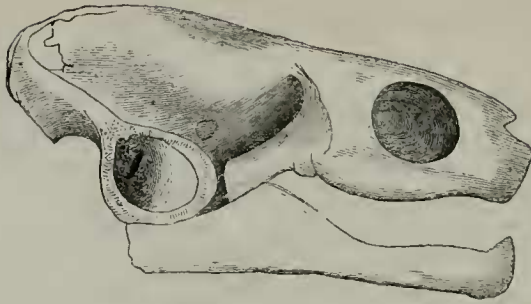
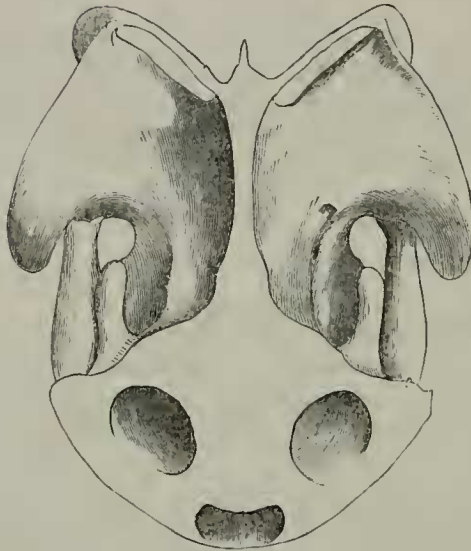


Fig. 2.

Skull of *Hydraspis raniceps*.

** *Head moderate; crown subshielded.* RHINEMYS.

2. *HYDRASPIS GIBBA*, Gray, *l. c.* 55; Dum. et Bib. *Erp. Gén.* t. 20. f. 2.

H. nasuta, Gray, *l. c.* 55.

*** *Head moderate; occipital and superciliary shields enlarged.*
Phrynops.

3. *HYDRASPIS GEOFFROYANA*, Gray, *l. c.* 57.

Phrynops geoffroyana, Wagler, *N. S. Amph. t.* 5. f. 47-51.

The species of this genus are very imperfectly known, owing to the want of more specimens of the animals in different states of growth, some having been established from adult, but the chief from only young examples. I am convinced that they cannot be deter-